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ABSTRACT

This guide is designed to acquaint public television station managers and staff with the video-teleconferencing business. For managers, the goal is to provide an overview of the market and an understanding of the facilities and personnel required to enter it. For staff personnel who may be assigned to video-teleconferencing responsibilities, the goal is to provide a basic understanding of the various elements required in each phase of the business, i.e., marketing, production, networking, and reception. The first chapter presents a brief historical review of one-way video/two-way audio video-teleconferencing. It lists some of the key motivations that have prompted groups to employ the medium, and concludes with some observations on competitive trends that may affect the public broadcaster's future role in video-teleconferencing. The second chapter covers market identification, promotion, and public awareness practices, direct sales methods, and video-teleconference service proposals. The focus is on small-market public television stations. To facilitate reading, synopses of the remaining chapters--Production, Networking, and Reception--are provided. Each chapter covers methods, procedures, and business considerations, and includes samples, examples, and diagrams. A partial directory of video-teleconference networking agents and packagers is appended. (THC)

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# VIDEO-TELECONFERENCING HANDBOOK for PUBLIC BROADCASTING FACILITIES

Prepared for
Corporation for Public Broadcasting

By

Media Communications Group
Publisher Services, Inc.
Alexandria, Virginia

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## INTRODUCTION

Public television stations are already a major resource for the emerging video-teleconference industry. A small number of stations in major markets serve as origination facilities, and most stations in state capitals and in the 50 largest markets regularly function as receive sites.

Many stations are examining this new industry as a potential income-producing source. Managers and staff also are seeking information on what video-teleconferencing is, how it is done and at what level they should attempt to participate.

There is a good reason for this interest. Public television stations with satellite receiving antennas form a fixed national network unlike any other. The significant difference between the public television satellite system and any other existing fixed satellite network is that all PTV stations are potential production centers as well as receiving sites, and most, if not all, PTV stations can offer full-service expertise (whereas downline nodes on other fixed networks must defer program development, production, and network management to others). Unlike other networks, however, there is no overall management and administration, no standard operating procedure and no systematic pricing policy within the public broadcasting community. Other fixed networks tend to be more uniform in these areas, hence predictable. Predictability translates into a competitive advantage for some other fixed networks.

The goal of this guide is to acquaint managers and staff with the video-teleconferencing business. For managers, the goal is to provide an overview of the market, and the facilities and personnel required to enter it. For staff personnel who may be assigned to video-teleconferencing responsibilities, the goal is to provide a basic understanding of the various elements

required in each phase of the business, i.e., Marketing, Production, Networking and Reception.

To facilitate reading, business managers are provided synopses of the Production, Networking and Reception chapters. Each chapter also contains a Business Considerations sections following a Methods and Procedures section. The first two chapters are recommended reading for those analyzing the market potential and level of effort required to participate in each phase of the industry.

Staff personnel with video-teleconferencing responsibilities are encouraged to read the Methods and Procedures section of appropriate chapters.

In addition to "Methods and Procedures" and "Business Considerations" sections, each chapter includes samples, examples and diagrams.

This guide also should be helpful to public radio stations that are considering retrofitting their downlinking capabilities to function as a receive site.

Chapter 1

# THE VIDEO-TELECONFERENCING BUSINESS

This chapter presents a brief historical review of one-way video, two-way audio video-teleconferencing. It lists some of the key motivations that have prompted groups to employ the medium, and concludes with some observations on competitive trends that may affect the public broadcaster's future role in video-teleconferencing.

The Business Considerations section of this chapter focuses on personnel requirements and recommendations for the public broadcaster considering a role for his or her station in the video-teleconferencing industry. Also, steps are proposed to initiate a video-teleconferencing business.

## Historical Review

One-way video, two-way audio closed-circuit television for private meetings--or video-teleconferencing--has been practiced at least since the 1950s. Throughout the 1950s and 1960s, however, one could not say that this specialized application of television was an "industry." It was a rarity, used by some groups in more or less routine fashion between two or more close locations or used by larger groups and corporations on special occasions.

Beyond this, the application was simply not cost-effective.

Telecommunications satellites introduced the element of cost-effectiveness. NASA propelled satellite applications by incorporating them into a series of projects, experiments and demonstrations in the 1970s using Applications Technology Satellites (ATS) and the joint U.S./Canadian Communications Technology Satellite (CTS, known in Canada as "Hermes").

Ironically, public service organizations (nonprofit) were the "subjects" for most of this experimentation and, therefore, were among the first to

realize the potential of video-teleconferencing as an alternative to rapidly inflating costs for long-distance meetings. Yet when the last of the NASA projects involving video-teleconference applications was completed in 1979, most of the public organizations disappeared as well.

Since 1979, the real growth in acceptance of video-teleconferencing has occurred in the private sector or among nonprofit organizations not directly involved in the early experiments.

Video-teleconferencing today may be defined as an enlarging market but not necessarily a maturing one. More and more organizations, businesses and nonprofit groups are trying video-teleconferences, yet the rate of recurring utilization by these groups is relatively small. (Groups that have conducted multiple video-teleconferences are typically professional associations attempting to make the medium pay off in the provisions of accredited continuing education to members.)

The public television satellite interconnection system emerged in 1978 as an alternative national vehicle for video-teleconferencing on a shared-use basis, which, it was presumed, would displace the largely experimental networks and facilities used during the NASA projects. During the period from late fall 1978 through 1979, by far the majority of domestic video-teleconferences used public television satellite system resources (occasionally in concert with others).

From 1980 through today, the public television satellite system as a national resource for video-teleconferencing has lost much of its lead. The displacing influences have been almost entirely in the area of receive site options (covered further below in "Competitive Trends").

Why Organizations Conduct Video-Teleconferences

Trial: Clients pay to conduct a video-teleconference because they do not

feel they can evaluate the medium's real potential without first-hand experience.

Depth of penetration: Clients feel they can reach more people, members or constituents through this technology than through a large face-to-face meeting requiring travel.

Cost advantages: Video-teleconferencing has been and is pitched as a cost-effective alternative to large group meetings requiring travel. When this can be demonstrated, it is often a compelling motivator for the prospective client.

Novelty and glamour: Some clients admit the mere idea of using television to "dress up" their messages is compelling. Adding audio interaction is an inducement to an already appealing medium.

Expediency: Several video-teleconferences over the past few years have happened because a crisis situation all but eliminated any other alternative of communications.

Profit: On paper at least, video-teleconferencing would seem to have some revenue-generating potential. Orchestrated like the now famous closed-circuit telecasts of prize fights, for which people pay a ticket price, video-teleconferences incorporating the proper mix of appealing content, effective promotion and economical networking should be able to generate more money than they cost. Several "pay-to-participate" video-teleconferences have, in fact, occurred and some may have netted revenue beyond cost for their programmers. All presumably successful cases known to the authors have been continuing education programs of some sort directed at particular target markets, typically members of the programming organization.

Competitive Trends

Major competition in the video-teleconferencing business has emerged in

the last two years. Thus far it has emerged in two areas: (1) competition for downlink and receive site services; and (2) competition for overall packaging and/or networking services.

(1) The Holiday Inn Video Network (HI-NET) emerged in mid-1980 as a strong but costly competitor of the public television satellite system for downlink and receive site services. This network continues to expand its number of locations (over 300 at this writing), and in 1982, HI-NET's prices decreased. HI-NET, however, is fixed on CABLENET 1. In the late months of SATCOM 1 and the early months of SATCOM III as CABLENET 1 (early 1982), satellite time for video-teleconferencing was scarce.

Other hotel and motel chains are either building or planning to build earth station networks. Some of the groups largely responsible for marketing earth stations to hotel and motel chains are selling steerable dishes with dual polarization, so hotels can repoint antennas to satellites with excess capacity for video-teleconferencing.

The factors motivating the hotel and motel industry to install satellite downlinks--delivery of premium cable fare to guest rooms as well as video-teleconferencing--suggest that the ear of the public television station as principal video-teleconference downlink and receive site for a community will be (or was) short-lived. It is unlikely that public television stations will feel compelled to compete with the amenities a hotel or motel can provide.

(2) In the video-teleconference packaging and/or networking area,* competition has surfaced in two forms. The first is businesses that

* For the purposes of this publication, video-teleconference "packaging" is intended to mean a coordinated service involving program planning, production and networking. "Networking" means the networking tasks minus program planning and production.

"network" video-teleconferences without any exclusive access to the resources (like travel agents). The second is businesses that "coordinate" video-teleconferences utilizing resources they have exclusive access to. For example, the Public Service Satellite Consortium (PSSC) is, among other things, an independent video-teleconference packager promoting access to a full range of facilities without necessarily having exclusive access to them.

Netcom International, on the other hand, is a video-teleconference firm (among other things) that has claimed exclusive access to a large number of transportable earth stations throughout the country.

In practice, none of the packagers or networking agents, so far, work in isolation. They often work together through subcontracts to provide complete service.

o The Mormon and Catholic churches are building dedicated downlink networks.

o At least three networks are under development to service the hospital and allied health communities.

o A network linking major market institutions of higher education has been proposed.

o A network for major corporations, trade associations and chambers of commerce is now being built.

Right now, specialty networks appear to be an evolutionary step beyond ad hoc video-teleconferencing. For groups intending to video-teleconference regularly, the decreasing cost of high-quality receive-only earth stations is a compelling reason to build self-sufficient systems.

Assessment

Common to these planned or progressing systems is considerable effort to propagate downlink sites with necessarily limited plans for dedicated

production and uplinking facilities. Given that public broadcasting facilities have or can manage full-time or occasional connectivity to a full range of DOMSAT (Domestic Satellite) uplinks, they may be able to replace their diminishing attraction as downlink and receive sites with a growing role as alternative production and uplinking sites.

Business Considerations

Traditionally, public television stations have not been in the practice of selling their services to the general public. If video-teleconferencing services--as well as other production, duplication and distribution services--are to be offered, a business plan, including marketing and accounting systems, should be developed. Even if your station lacks experience in the business environment, you probably have the basic talents and facilities needed for program development, design packaging, grantmanship and production.

A video-teleconferencing business for your station will require a person or persons who--

- o understand satellite-based, one-way video, two-way audio technology and its applications;
- o can recognize and exploit opportunities to impart this understanding to others;
- o can present the "video-teleconferencing story" in an enthusiastic and compelling fashion before individuals and groups;
- o can listen to a prospective client's problems and ideas and respond quickly, articulately and imaginatively with proposed video-teleconferencing solutions and opportunities;
- o can find and package in proposal form the details of offering video-teleconference service;

- o can negotiate with prospective clients on behalf of your station;
- o can compose legally sound agreements and contracts and review documents composed elsewhere for legal soundness;
- o can manage budgets and perform accounting tasks; and
- o can administrate and supervise.

These skills probably cut across your current management and professional staff. Key managers, development staff, production manager, senior producer, chief engineer all possess the expertise outlined above. From a business point of view, assigning a majority of the responsibilities to one person or a core team is better than spreading tasks around. Staff positions titled "Manager of Telecommunications," "Telecommunications Director," or the like, may consolidate any of the skills and responsibilities for a video-teleconferencing service.

Whether the requisite skills for building a video-teleconferencing business are consolidated into one person, or involve several members of your staff, a start-up plan for developing a video-teleconferencing enterprise is required.

## Starting a Video-Teleconferencing Business

### Assumptions

(1) You want to pursue a video-teleconference business to supplement your income. Any investment required beyond labor and overhead to develop the business is risky.

(2) The gestation period between initial exposure of a prospective client to the idea of video-teleconferencing and signing a video-teleconferencing contract can be a year or longer. Your commitment to business development cannot be a short one. If your overhead is minimal because of limited staff involvement, one-person-year of effort may actually mean a development period

of 18 months to two years. If an individual works on the project 50 percent of the time, one-person-year effort will last two years. If, by necessity, staff involvement is greater, the equivalent one-person-year investment spans less time, e.g., three people working 25 percent of their time on the project will consume the equivalent of one-person-year in 16 months. Therefore, the more people you must delegate to developing a video-teleconferencing business, the less time you have to "turn the corner" and start realizing net income. Additionally, if your team is too large--because you have no one with the appropriate combination of skills--you may be forced to turn the corner too soon; your resources may be exhausted before you can satisfactorily develop your market.

Step One - Determine your capacity to handle video-teleconferences and the cost of a model production and origination service. Capacity implies how much time you have or could make for video-teleconference production. It could be that between your daily broadcasting schedule, your daily satellite program feeds, and your peripheral activities (e.g., instructional television projects), your excess capacity is only a few hours per week. But it is also possible that considerable amounts of your current activities depend on diminishing financial support. You have probably established a rate card for production services. This will suffice without modification for some video-teleconference services. Since certain efforts such as consultant/ producer may be extensive, however, a weekly rate may be desirable to keep you competitive.

If you do not have a rate card for video-teleconferencing production services, you must develop one. The card must reflect your true cost of doing business and any return-on-investment goals your organization has set. The card also must reflect a fair price for services based on capabilities and

competitive forces in your market. Remember that many video-teleconferences are lengthy in both their development and production phases. Telecourses--multiple-day events--are even more lengthy, often spanning a period of several months.

A customized rate card may be developed that offers services at half-day, full-day, weekly or bulk-use prices.

Conduct research to find out what others in your market or similar markets charge for like services. Use the expertise of your financial advisors, or retain a consultant to assist in developing both the business plan and the rate card.

Determine what it will cost to connect your station to one or more satellite uplinks. Some public television stations already have this capacity through duplex channels to state or regional networks with uplinking headends. In other cases, you should predetermine access routes and costs to any of the uplinks serving the whole range of DOMSATS (WESTARS, SATCOMS and COMSTARS).

Although there are no universal averages for video-teleconference production and origination costs, first-hour charges typically range from just under $1,000 to about $3,000 for a basic two-camera production without inserts. When you have determined the costs of connectivity to uplinks and uplink services and have added this cost to your rates for a simple two-camera production, your total should fall somewhere within this range.

Obviously, if you are in a minor market, you should be closer to the low end of the range. In larger markets, everything tends to be more expensive. But if you are in a previously untapped video-teleconference market, model ranges may be meaningless. Your task is to market the <u>value</u> of your service regardless of price.

<u>Step Two</u> - Assess your market's client potential. The "Market

Identification" section in Chapter 2, "Marketing," presents some of the perspectives you should consider in conducting this assessment. The Yellow Pages, the local chamber of commerce, a local association director, and other resources may reveal potential clients.

Assembling a large list of prospective clients in your market is important, but not nearly as important as qualifying the prospects on that list. For example, one trade association, in an era of increasingly prohibitive travel cost, fighting to maintain an established schedule of frequent face-to-face member meetings is potentially more valuable than dozens of prospects who are happily occupied with their newsletter business. A corporation with a new product is more likely to be receptive than one that has not changed its product list in years.

In industries like video-teleconferencing, you qualify prospects as best you can according to need. This is one of the activities that involves your staff during the development period: expect to make mistakes. You may presume a prospect is a "sure bet" when in fact it is on the verge of bankruptcy. A prospect's ability to pay is another qualifying consideration.

Step Three - Discuss your video-teleconference business objectives with legal counsel. As nonprofit corporations, most public broadcasting facilities need to be sensitive to the limitations of their business involvements in terms of FCC limitations on their licenses and their own corporate charter.

Step Four - Develop a marketing plan. The sections in Chapter 2, "Marketing," subtitled "Promotion and Public Awareness," "Direct Sales," and "Proposals" present approaches to marketing that you should consider.

The marketing representative for your station may be the station manager, a sublevel manager, a member of your development staff or another employee. Whoever it is, the job is key.

An effective plan must contain specific directives. For example, in the area of promotion, the plan should detail just what promotional vehicles are to be employed (e.g., the station program guide) and when they are to be employed. In the area of direct sales, the marketing plan should call for X face-to-face meetings; one-on-one sales meetings are hard to dictate, but a number of group presentations at the station, for which invitations are sent, may be regularly scheduled.

If the marketing plan incorporates out-of-pocket costs (e.g., entertainment expenses, advertising, transportation), these should be projected and budgeted. The marketing plan should include a review and evaluation procedure. Consider marketing activity reports submitted at regular intervals to station management, or committee meetings regularly scheduled to discuss marketing activities, results thus far, and new ideas or recommendations.

Step Five - Determine who is to take responsibility for program planning and production tasks (see Chapter 3, "Producing").

Your broadcasting and peripheral activities schedule may not permit you to pre-assign a producer to video-teleconferences. Nevertheless, based on the parameters of video-teleconference planning and production discussed in Chapter 3, you should evaluate your staff procedures and make a decision as to who is most qualified to handle this specialized form of production. If more than one individual seems to meet the requirements, your problem is easy to resolve. But if you have only one producer whom you would entrust with the development and production of a client-financed video-teleconference, you may wish to prepare this individual for a fast schedule adjustment in the event that an occasion requires it.

Step Six - After reading Chapter 4, "Networking," determine whether you intend to handle networking tasks internally or to subcontract them. In the

latter case, little else need be done until you are prepared to request a contract for a specific prospective video-teleconference.

Chapter 2

# MARKETING

Given the current state of the video-teleconferencing industry and future competitive trends, production and origination are the most readily marketable components of video-teleconferencing services. This chapter covers market identification, promotion, and public awareness practices, direct sales methods, and video-teleconference service proposals. The focus in this chapter is on small-market public television stations, since many major-market stations already have developed and are providing video-teleconference services.

## Market Identification

Most video-teleconferencing activities have been generated in major markets. Prospective users in smaller markets have simply not been approached by the video-teleconference packagers who are, themselves, located in major markets. Approaches to tapping the smaller-market video-teleconference prospect are limited only by the imaginations of those suppliers best equipped to service them. This handbook cannot exhaust the universe of ideas. A possible starting point for an assessment of small market video-teleconference potential is a consideration of the market's special characteristics.

For example, a small market may be home for a one-of-a-kind corporate staff training center; a campus where the national sales force is taught. In this case, the ultimate prospect for the public television station's video-teleconference service may not be that campus, but may be the parent company located in some major market. The company might respond favorably to a mechanism through which its sales graduates can take refresher courses without leaving their homes to return to the training center.

This is an example of a unique opportunity in a small market. Public

television stations serving small markets should look for similar opportunities, but should also seed the imaginations of the community at large. Most video-teleconferences have not been germinated in the minds of package or networking agents. The most successful marketing so far has proven to be information that seeds the general imagination.

To prod this imagination, public broadcasting facilities in small markets should promote the concept and the technology itself, rather than try to market a specific event. Promotion of a station's capability to produce and originate video-teleconferences could yield results no development effort could foresee.

Promotion and Public Awareness

Video-teleconference production and origination services appear to have the most revenue potential for public television stations. A station's production equipment and personnel with access to satellite uplinks (ideally servicing all domestic satellites) are the key services to promote in local markets.

Consolidating production and uplinking (origination) capabilities into a succinct statement is the first step to a successful promotional campaign.

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Facts

(1) WXYZ-TV in Mid-America, U.S.A., can be connected to a Western Union uplink via AT&T for an estimated $750 temporary construction charge and a time/distance service fee. The Western Union uplink accesses WESTAR III.

(2) WXYZ-TV also can reach SATCOM III via the same AT&T service to an RCA uplink.

(3) WXYZ-TV can accomplish a basic two-camera production starting at $450 an hour.

(4) WXYZ-TV has the capability to mix incoming phone calls into program audio.

Treatment of the Facts for Promotion

"Business and organizational communicators in Mid-America, U.S.A., may be surprised to learn that a visit to WXYZ-TV at Fourteenth Street and DelMonte Boulevard can enable them to talk face-to-face with client and colleagues throughout the country. The technology is called video-teleconferencing. It's working every day, all across the country, through facilities that, like WXYZ, can transmit private TV signals to satellites and tie in the audiences, live, via telephone.

"Costs vary depending on how long you need to 'teleconference,' and how many people and places your video-teleconference involves across the country. Costs for WXYZ's video-teleconferencing services begin at $2,000 for the first hour. Call Patricia Smith, Telecommunications Coordinator at WXYZ, for complete information."

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Two vehicles for local promotion should be considered. The first is your program guide. A feature story on your station's video-teleconference capabilities could be run, followed by repetitive display ads or local press releases. The second vehicle is the prospect and supporter mailing lists compiled and maintained by your development department. Special direct mail correspondence to these lists will enhance public awareness of your capabilities.

Additionally, you should consider creating a short, videotaped introduction to your facilities and video-teleconferencing service potential. Create appropriate occasions: open houses at the station, speeches and appearances at outside meetings, or dub and distribute directly to potential clients.

Issue news releases on every video-teleconference service you provide in your community. News releases about hosting local groups for video-teleconferences produced elsewhere can lead into a statement of your own capabilities for video-teleconference production and origination.

Direct Sales

Gestation time between a client's first introduction to video-teleconferencing and first actual use is, on the average, 12 to 18 months. Whenever possible, established video-teleconference packagers employ group exposure and demonstrations to introduce new prospects to video-teleconferencing. "Blind-call" sales meetings are simply too expensive to count on as a principal sales technique.

If you intend to market video-teleconference origination services and are currently called upon to provide downlink and receive site services for teleconferences produced elsewhere, you should capitalize on every opportunity to expose your prospects to video-teleconferencing. It is not a good idea, however, to bring in observers, videotape or photograph a group at your station unless you have permission from the firm who contracted for your services. Permission should be routinely requested.

You also should assume that video-teleconference participants at your station are in themselves potential clients or contacts to clients. You should not be obtrusive in your presentation to guests who come to your station to participate in someone else's video-teleconference; hand them some

of your own station's promotional material on their way out. Never take their time to present your videotape or make a speech about your video-teleconferencing service. (See Chapter 5, "Downlink and Receive Site Services," for more tips on how to impress your video-teleconference guests.)

When a prospect does call with a request for information about video-teleconferencing, arrange a face-to-face meeting, if possible, and use your lead time to research the prospect. Know as much about the prospect's presumed requirements or interests as you can. Be prepared to comment directly on those requirements or interests.

Most of the time, unless you are proposing a specific video-teleconference, which is rare, you will not know enough detail about the client's interests to be prepared with costs quotes. Even if you do know what the client's specific interest is, it is probably premature for you to put together a formal proposal including costs. In any case, during the preliminary sales meeting, talk only about what you know.

During the direct sales encounter, try to ascertain what the client expects the video-teleconference to cost. In case the client has no idea, try to determine what alternative solution to the communications problem under discussion might cost. For example, if the client proposes a video-teleconference among colleagues in a dozen cities across the country, find out what the client might otherwise pay to convene such a meeting. Although comparative costs are proving to be less of a selling motivator, they are useful.

You may be able to ascertain that cost is not a concern. Effectiveness of the technology and technique may be the motivating factors. In this case, you want to be able to reinforce the prospect's belief that closed-circuit interactive television is indeed an effective communications medium. If possible, you want to draw on supportive statements made by clients who have

successfully used the medium.

Any preliminary face-to-face sales meeting with a prospective client warrants an upbeat closure. Leave the sales meeting enthusiastically and with a promise to provide something. What you promise to provide may simply be answers to questions you were unable to answer during the meeting, but if at all possible, what you want to provide is a proposal. This proposal will be a formal offer to provide a service. A very important part of that proposal will be the budget.

Proposals

Your formal written proposal is your single most important sales device. As such, it requires considerable attention to detail and to appearance. A sample proposal format is included in this chapter.

Here are some do's and don'ts about proposal presentations:

o Do focus on the details that you sense are most important to the prospect. For example, if the prospect is concerned about hospitality at receive sites, present what hospitality you intend to have receive sites provide. On the other hand, don't bore the prospect with details he is not yet concerned about. For example, the prospect may not be concerned at this point with visual techniques to be applied in production. You must, of course, budget according to your best guess of what techniques the client may require, but in the proposal you should not use more than a sentence or two to describe visual enhancement devices and their capabilities.

o Do demonstrate in both the format and the content of your proposal that you have developed the prospect's video-teleconference ideas. Don't do this by expounding on incidentals. One easy way to demonstrate a developed idea is to refer to comments or questions raised during the preliminary meeting that you have subsequently thought more about or have answered.

o Do write a cover letter. In the cover letter, propose a next step. This may be another meeting to discuss the proposal, or simply a date and time you will telephone.

o Do package your proposal attractively, but practically. Bound proposals are usually troublesome to the prospect. Pages that can be easily separated and reproduced for internal distribution are much better.

o Don't overuse jargon or technical terminology. Some jargon is, of course, necessary, especially in budget sections where you list line items. Define terminology for the prospective client.

o Don't let a proposal leave your station with typographical errors, poor English, or poor format and appearance.

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SAMPLE PROPOSAL FORMAT

Cover Letter

o Thank the prospect for the opportunity to propose a service.

o Refer to preliminary sales meeting (or written request for proposal, if one was received).

o Point to items within the proposal that are of particular interest to the prospect or that are developments based on preliminary information.

o State how the proposal is formatted.

o Address next steps.

Introductory Summary

o State what is being proposed (scope of the proposal).

o State the total of the proposed budget.

o Introduce subcontractors (if appropriate).

Preproduction Budget and Discussion

- o Line items.
- o Discussion of line items as appropriate.

Production, Uplinking and Satellite Budget and Discussion

- o Line items.
- o Discussion of line items as appropriate.

Network Budget and Discussion

- o Line items. Individual receive sites should be identified with cost unless a "package price" is offered. In the case of "package prices," it is advisable to discuss budget ramifications of adding or dropping locations.
- o Discussion.

Management and Administrative Fees and Discussion

- o All applicable fees, including fees to be paid to subcontractors, if appropriate.
- o Discussion.

Terms and Conditions (See note three below.)

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NOTES

(1) Identify all prices that are estimates, and state what unknowns may affect cost.

(2) Identify all line items for which availability is uncertain at the time the proposal is submitted. For example, you may know what satellite time will cost, but you may not know if time will be available, especially if the prospect has not identified a specific date and time.

(3) "Terms and Conditions" include payment terms, and statements of your limitations and liabilities. Your attorney should assist in standardizing terms and conditions.

Chapter 3

# PRODUCING

SYNOPSIS

Video-meetings require development and production services.

The development phase is largely a consulting and organizational task. Many video-teleconference users have in-house meeting planners and content specialists who put together traditional types of meetings--generally live, face-to-face seminars, workshops and conferences. Most organizations do not have staff with the skills to develop a successful video-teleconference--one that takes advantage of the television medium.

Most public television stations also lack a consultant/producer with the multi-dimensional skills required. Experience in business communications, training, seminar development and live-interactive television is needed. Patience and an understanding of organizational management are equally essential.

On the positive side, most PTV stations are capable of providing the technical aspects of video-meeting production. Videotape cassettes are similar to magazine or talk formats.

Interaction between participants is what makes an event a video-teleconference. Your facilities must be equipped to integrate telephone call-ins into the program audio. The ability to transmit your signal to an uplink is equally essential.

This chapter examines the development, preproduction and postproduction aspects of video-teleconferencing. It discusses the development process, formats, facility and interactive audio requirements and connectivity.

METHODS AND PROCEDURES

There are three stages in producing a video-teleconference:

I. Agenda planning and program development

II. Preproduction

III. Production

Occasionally there is a fourth stage, postproduction. Some clients will want to repackage the event for further use.

I. Agenda Planning and Program Development

Your client will have a reason to video-conference: to increase membership attendance at seminars; introduce a new product; or to present a speaker who cannot appear in person. Only the televised speaker will not require extensive development and agenda planning.

The majority of video-teleconferences are informational, or educational. They can vary from one- to four-hour telecasts dealing with a single issue or product, to several-day telecourses with comprehensive instruction in broader categories.

Telecourses usually are developed by organizations that have courseware development teams or training departments. Such organizations generally will have a media specialist who will address preliminary production requirements. This is not the case for most single event video-meetings.

Generally, a video-teleconference is planned and presented by a communications, education or marketing committee or a public relations department or firm. Video-teleconferencing is such a new entry in group communications that few will have any first-hand experience in developing and

producing these special events.

Producers or others knowledgeable in business communications, seminar and meeting planning, training and live interactive television, are best qualified to consult clients or prospects.

Organizers of video-meetings have specific objectives in mind. It is the responsibility of the producer to ensure that the format, the agenda, and the production methods used enhance the communications process rather than distract.

Video-teleconferences should not be Hollywood productions, but must have sufficient production value to attract and hold audience attention. There is as much danger of underproducing as there is of overproducing. Appropriate is the key word.

Budget permitting, video-meetings should take advantage of the wide variety of production techniques available through the medium to improve audience understanding and retention of the information presented. Initial experiments in video-teleconferencing used the medium as a conduit. They were generally "talking head" programs that connected speaker to viewer via television technology. Only a few incorporated the multi-media capabilities of television.

It is the producer/consultant's responsibility to guide the development team toward a presentation that will take advantage of these capabilities and to ensure the transfer of information.

The rationale behind video-teleconferencing is to save time and money. Otherwise, users would hold traditional meetings. Producing and networking are often the largest line items in a budget. Network cost is seen as a necessary evil. Production costs are the first targeted for trimming. The level of income received from video-teleconference production will depend on

volume rather than large budgets.

II. Preproduction

Prior to development, many clients believe that their traditional face-to-face format can be adapted to television by simply adding cameras. The result of such thinking is generally a poor piece of communications--the "talking head" syndrome. The agenda of a preproduction phase appropriately will include:

A. Choosing on-camera talent

o Most speakers will be selected for what they know, not for their on-camera acting ability. These presenters generally will need some coaching and reassurance to help ease the tension of being on TV.

o Hosts or moderators may be professionals. Their role is primarily as facilitators. They may lack sufficient knowledge about the sponsoring organization and content material, however, to play a "believable" role. Before hiring a professional, search the clients' PR and communication departments for someone with TV experience.

o Unions are assessing what fees to charge for a video-teleconference host. They, of course, want to apply national distribution rates, and are concerned with reuse (many video-teleconferences are repackaged as training or orientation modules). No set fee has been determined at this writing.

B. Adapting stock materials

o Many clients have films, videotapes, slide shows, photographs, artwork, etc., which they will want to include in their video-teleconference.

o The client generally will have no knowledge of the four restricting factors in using stock materials:

1. Aspect Ratio

2. Contrast

3. Legibility

4. Rights Clearance

o All stock materials need screening prior to inclusion in the agenda.

C. Pretaped Elements

o Pretaping allows both control and variety in the final product. Encourage clients to consider pretaping--

-- demonstrations

-- model playing, dramatizations

-- role playing

-- non-essential speakers (courtesy appearances by organization president, etc.)

-- panel discussions where participants will not be involved in the interactive sessions

-- training modules

-- open, close and any description of how video-teleconferencing works.

D. Staging Considerations

Video-teleconferences require minimal sets and dressings. Most video meetings have a host and a panel. A simple, non-intrusive environment is appropriate, either abstract or realistic.

E. Rehearsals

Depending on the production complexity and the client's budget, rehearsal requirements will vary. Simple transmissions require little more than a plan on how to get in and out of the show. Major events may require a full complement of rehearsals such as individual presenter/speaker rehearsals with camera and recorder (away from studio); talk-throughs with all on-camera talent (away from studio); dress (not usually done); open and close (usually

just prior to air).

Also to be determined during the development process are--(1) how the interactive mode will be used and what method will work best; (2) what participant material will be required (background information, workbooks, diagrams, etc.); and (3) the need for audience attitude profiles, pre and post tests, and evaluations.

III. Production

In video-teleconferencing, production refers to the event itself--the on-air time.

Most video-meetings are a cross between a magazine and a talk format. What may be unfamiliar to your production crew is (1) the length, (2) the interactive periods and (3) the need to pay extra attention to aiding nonprofessional talent, who are generally very nervous.

(1) Length

With the exception of "guest speaker" video-meetings, most conferences last an average of two to six hours or longer.

Workshops generally last one or two full days, and have on-air and off-air activities.

(2) Interaction

Without this feature, the client has little justification for going live. The event could be distributed on tape at less expense.

Problems usually occur during the interaction period. Unless your station currently and successfully airs shows with interactive (call in) audio, a great deal of planning and preparation will be required. Your local telephone company can provide assistance for a fee.

(3) Nonprofessional Talent

Most video-teleconferencing clients have no experience in television

production. Their on-camera talent is equally inexperienced. They'll be as confused by the environment and the terminology as the city council or school board members who appear on your public affairs shows. Patience is required.

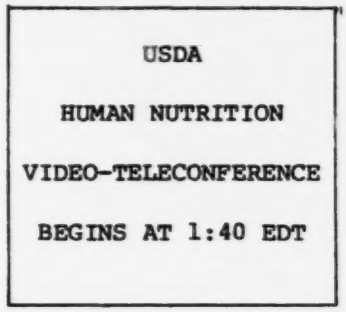
Tests

Expect a one-half to two hour test period, which is necessary to allow receive sites to come on line and adjust their equipment.

An all-PBS network can generally come on line in 15 to 30 minutes. With a mixed network of transportables, stations, hotels, convention centers, etc., it is safer to allow up to two hours. You will need to establish a tie with your uplink facility prior to the test period.

During the test, transmit color bars and a "Odb" 1kHz tones. Key identifying text over the color bars.

Example:




An interactive audio test may be conducted with a designated site, or with a remote network coordinator, during the first few minutes of the test period.

For a professional presentation, do not allow mike checks and tape or disc cueing to go out over the air.

Replace the tone with appropriate music five minutes prior to the program start.

IV. Postproduction

Your client may want to edit various versions of the telecast, taking advantage of residual value. Editing should be done prior to the event so arrangements can be made to record the program; a line item for recording can be included in the budget.

Post event usage may include--

(1) Creating a highlight or sampler reel to demonstrate the essence of the program to upper management.

(2) Repackaging the program, with additional narration, so it can be distributed to secondary audiences, new employees or members, or to those who missed the original event.

(3) Dividing the program into modules that address specific areas. A U.S. Office of Education video-teleconference, for example, contained four stand-alone training modules that were made available to users after the event.

Common Formats

Although the video-meeting application of interactive technology is relatively new, three common formats have been developed that are useful for a high percentage of video-conferences.

(1) Discussion

--Generally similar to an audio conference (conference call).

--Should be used only when visualization is essential.

--Works for small groups. Best when participants and subject matter are well known by all.

--Requires an agenda, leader, and adherence to parliamentary procedure.

(2) Lecture

--Presentations and panel discussions followed by interactive question and answer periods.

—Works well with large audiences.

--Interactive periods limited, but audience perceives they had the ability to interact.

—Good format for seminars, forums and guest speakers.

(3) Workshops (telecourse)

—Similar to the lecture format, but also incorporates workbooks, off-air activities, simulations, role play, etc.

--Interactive periods include general question-and-answer, and receive site participation during simulations and problem solving elements.

(4) Special Formats

--Event coverage.

—Fund raising.

--Debate.

—Guest speaker.

--Product introduction.

Production Requirements

Any studio facility capable of producing a live news or magazine program should be able to produce a videc-teleconference. Any remote truck capable of multi-camera live coverage of an indoor sporting event should also be able to fill the needs of most conferences.

An average conference uses: a studio with lighting, an interview or panel set, dressings; two to three cameras; a videotape playback; a character generator; a film chain or electronic still storer; video and audio control; an audiotape playback; microphones, foldback, IFB; and monitors.

Minimum audio requirements for the interactive portion of the conference include a telephone coupler, an IFB system and (if studio audience is present) a foldback system.

In one-way video, two-way audio conferences, audio from receive sites reaches the originating site via telephone. Couplers are used to input telephone lines into the audio mixer. Three commonly-used interactive methods are--

- o call collect (using the Bell System's network);
- o IN-WATS (toll free 800 numbers, Bell System); and
- o bridges (telephone bridging systems).

(1) One way bridge - carries signals from remote sites to originating site.

(2) Two way bridge - carries all audio.

If the call-collect or IN-WATS methods are employed four to eight incoming lines in rotary generally are used. Preferably, all lines should be coupled into the mixing board. If a bridge is used, only one in-coming line need be coupled to the board.

The on-camera participants will need to hear the incoming calls. The studio audience also must hear the calls and, like remote site audiences, require "mikeing" so they can ask questions.

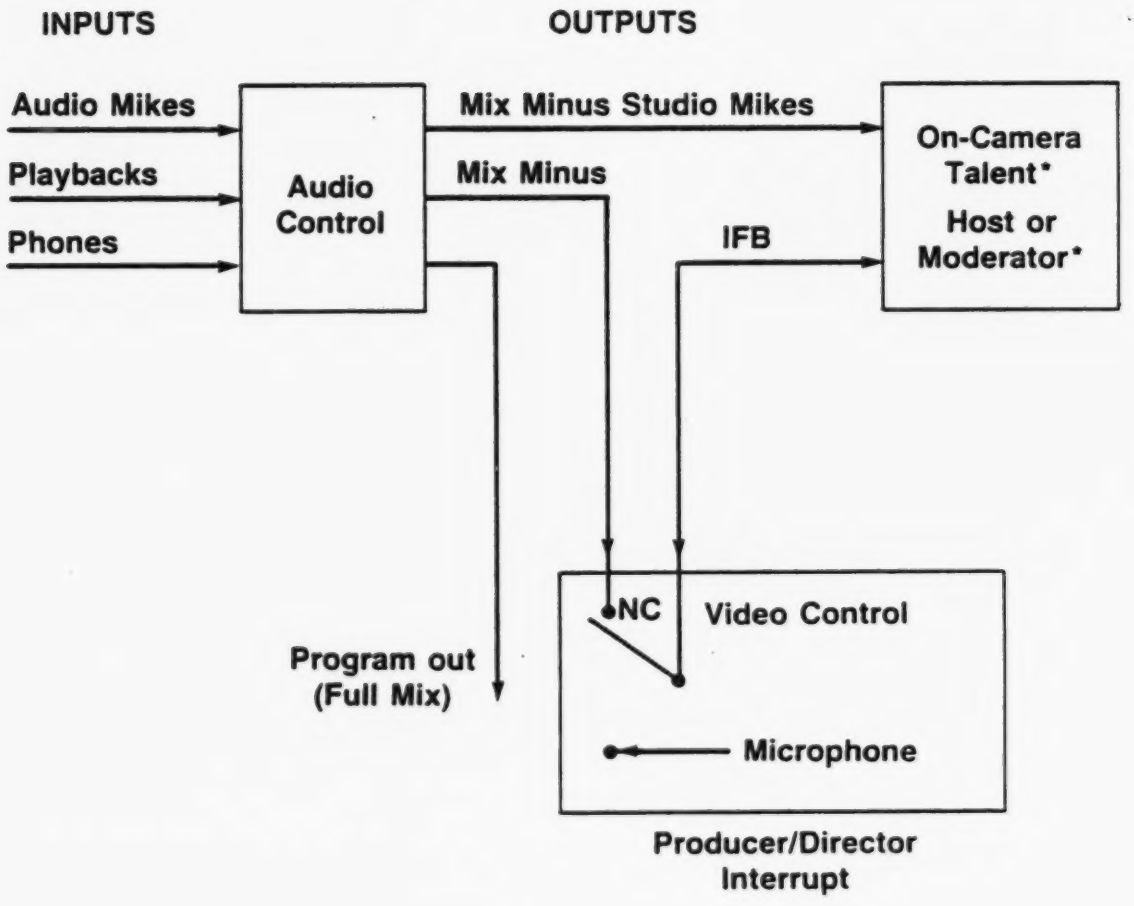
If there is an in-studio audience, careful manipulation of the foldback and incoming levels is required to suppress feedback and echo. Even when steps are taken to eliminate feedback and echo at the originating site, they may still be produced by telephones at the receiving sites. The moderator and/or host should have an IFB for producer and director interrupt.

If there is no in-studio audience, participants involved in the question-and-answer elements should wear ear pieces through which they hear callers' questions.

Due to the quarter-second delay between send and receive sites, there is a tendency for feedback and echoing in interactive audio.

(SEE DIAGRAM ON FOLLOWING PAGE)

# "CLOSED" AUDIO CIRCUIT




* Talent Hears "Mix Minus" Via Earphones

Connectivity

Accessing satellite uplinks may be the greatest roadblock to providing origination services. The number of uplinks is growing, but nonetheless limited. Even if there is an uplink nearby, establishing a connection can be costly.

Downlinks must also be taken into consideration. If an all-PTV network is used, it will include one of the direct polarized transponders on WESTAR IV. (In addition to the PBS MOT in Washington, D.C., 10 PTV stations own uplinks. Western Union also operates uplinks in five unduplicated areas. Various local common carriers also can access WESTAR IV via privately owned uplinks.)

To access other satellites (Satcoms, Comstars, Intelsats and future systems), appropriate uplinks must be located.

Getting your signal to a non-collocated uplink requires land line or microwave systems. AT&T (TOC or TELCO) or local common carriers will provide permanent or temporary connectivity. Both can be expensive adventures. Each case is unique, check with local suppliers.

Also available are transportable uplinks, which are very expensive, but useful in areas where time, money, or physical restrictions prohibit construction of permanent facilities.

Security

Clients may want to include private company information in their video-teleconference. The simplest method to prevent unauthorized reception is to send the audio on a two-way bridge with only the video traveling via satellite. If this method is used, the bridging should include a delay mechanism to keep the audio from arriving ahead of the video, which makes a 44,600 mile trip.

Greater security can be ensured by encoding the signal at the point of origin. Each authorized receive site will require a decoder. Oak Communications provides such equipment.

In the near future, addressable reception systems will allow greater security at a greater price.

Business Considerations

Marketing your facility as a receive site is a relatively easy, inexpensive task. You need go no further than notifying the growing number of network coordinating organizations of your availability.

Marketing your facility as a video-teleconference development and production house is another matter. Announcing your availability to coordinating organizations is an insufficient draw for business. You must define and develop your market which will require far greater effort than actual production.

On the positive side, most PTV stations should be able to handle the current small demand for origination services without stress or interruption of normal functions. Moreover, with the exception of the demands on the producer and the audio system, video-teleconferences are easy to stage. Production personnel, however, generally consider video-teleconferencing as something less-than-legitimate television; and are not usually acquainted with the development aspect of producing video-meetings. Because most clients need this service, you should locate qualified subcontractors who can be brought in when needed.

Expansion of station telephone-audio mixer interfacing system may be required as well as connectivity to satellite uplinks which can be costly. Even if your station is in a major market, ad hoc video-teleconferencing probably will not provide sufficient revenues to support an uplink, or even a

permanent, active TELCO loop. Video-meetings should be considered as a secondary source of income--with only a few number of events possible each year.

Pricing and Cost Recovery

Current pricing practices are suppressing the growth of the market. Network cost is the principal culprit, but production is running a close second.

Part of the problem is the prospective user's ignorance of the time and cost associated with production. The second part of the problem is that some production facilities may be charging more than the market will bear.

Video-teleconferences are not high profit makers. They should be considered as supplementary sources of income.

**TENTATIVE AGENDA**

**Day 1--August 25, 1981**

| Eastern (EDT) | Central (CDT) | Mountain (MDT) | Pacific (PDT) | |
|---|---|---|---|---|
| 11:30 | 10:30 | 9:30 | 8:30 | **REGISTRATION** |
| Noon | 11:00 | 10:00 | 9:00 | **TELECAST BEGINS** |
| | | | | **Welcome and Orientation**--Cecilia M. Lovette, Host<br>**Marie D. Eldridge**, Administrator<br>National Center for Education Statistics<br>U.S. Department of Education<br>**Donald J. Senese**, Assistant Secretary<br>for Vocational and Adult Education<br>U.S. Department of Education<br>**Robert M. Worthington**, Assistant Secretary<br>for Vocational and Adult Education<br>U.S. Department of Education |
| **12:15** | **11:15** | **10:15** | **9:15** | **Overview of VEDS**--Robert L. Morgan |
| **12:40** | **11:40** | **10:40** | **9:40** | **Classification of Instruction Programs**--<br>Gerald S. Malitz |
| **1:10** | **12:10** | **11:10** | **10:10** | **Questions and Answers**--David B. Orr, Moderator<br>Gerald S. Malitz<br>Robert L. Morgan<br>Andrew J. Pepin |
| **1:30** | **12:30** | **11:30** | **10:30** | **Coffee Break/Lunch** |
| **2:00** | **1:00** | Noon | **11:00** | **VEDS Follow-Up Component**--Ellease P. Dill |
| **2:45** | **1:45** | **12:45** | **11:45** | **Questions and Answers**--David B. Orr, Moderator<br>Ellease P. Dill<br>Roslyn Korb<br>Robert L. Morgan |
| **3:15** | **2:15** | **1:15** | **12:15** | **Follow-Up Exercises** (Off the air) |
| **3:45** | **2:45** | **1:45** | **12:45** | **Answers to the Exercises**--David B. Orr |
| **4:00** | **3:00** | **2:00** | **1:00** | **Questions and Answers**--David B. Orr, Moderator<br>Ellease P. Dill<br>Roslyn Korb<br>Robert L. Morgan |
| **4:25** | **3:25** | **2:25** | **1:25** | **Wrap-Up**--Cecilia M. Lovette |
| **4:30** | **3:30** | **2:30** | **1:30** | **Adjourn for the day** |
| **5:30** | **4:30** | **3:30** | **2:30** | **(Telephone lines remain open until this time for further questions and answers)** |

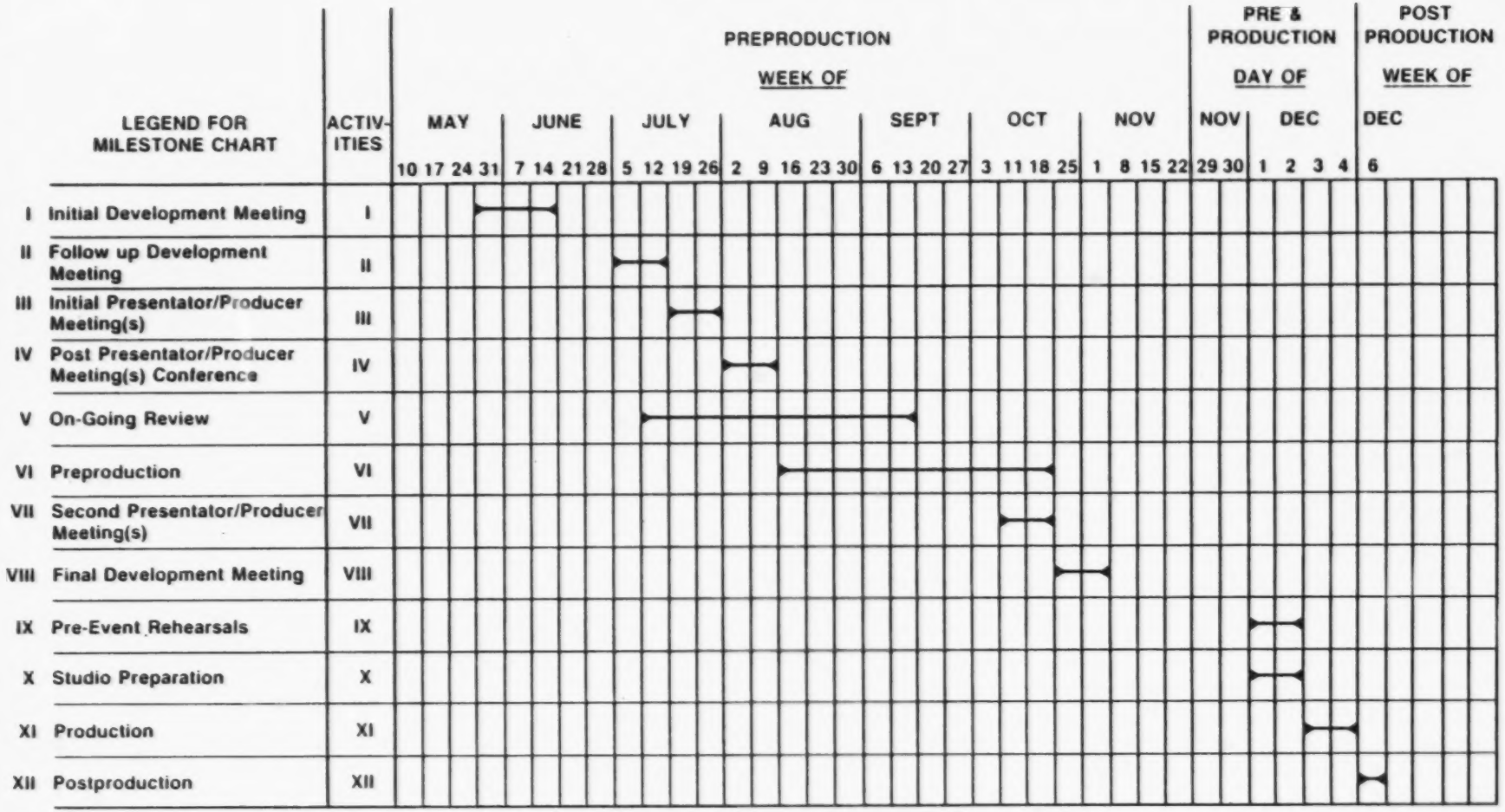
Light type A.M.
**Bold Type P.M.**

**MCAA**

**TELECONFERENCE**

**FIVE-HOUR SCHEDULE**

| | | | |
|---|---|---|---|
| I. | Introductions | 15 minutes | 0:15 |
| | a. Moderator | 5 | |
| | b. MCAA President | 3 | |
| | c. Moderator | 7 | |
| | 1. Introduce three speakers (each speaker one minute overview) | | |
| | 2. Cover agenda | | |
| | 3. Cover question and answer period | | |
| II. | Kerry O'Brien | 60 minutes | 1:15 |
| | a. Results on-site productivity studies | | |
| | b. Actual case histories | | |
| | c. (Pre-planning) How to implement | | |
| | d. Questions and answers | 10 minutes | 1:25 |
| III. | Break | 10 minutes | 1:25 |
| IV. | Jeffrey Busley | 45 minutes | 2:20 |
| | a. Questionnaires and survey uses | | |
| | b. Quality circles/productivity committees | | |
| | c. Time lapse photography | | |
| | d. Questions and answers | 10 minutes | 2:30 |
| V. | Break | 20 minutes | 2:50 |
| VI. | Kenneth Blanchard | 60 minutes | 3:50 |
| | a. Feedback as breakfast of champions | | |
| | b. Key to developing people is to catch them doing something right | | |
| | c. Paying the price to improve productivity | | |
| | d. Questions and answers | 10 minutes | 4:00 |
| VII. | Break | 10 minutes | 4:10 |
| VIII. | Panel Discussions and Questions and Answers | 45 minutes | 4:55 |
| IX. | Close (Moderator) | 5 minutes | 5:00 |
| | a. Summary | | |
| | b. Administrative | | |


PREPRODUCTION
WEEK OF
PRE & PRODUCTION
DAY OF
POST PRODUCTION
WEEK OF
LEGEND FOR MILESTONE CHART
ACTIV-ITIES
MAY
JUNE
JULY
AUG
SEPT
OCT
NOV
NOV
DEC
DEC
10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 6 13 20 27 3 11 18 25 1 8 15 22 29 30 1 2 3 4 6
I Initial Development Meeting I
II Follow up Development Meeting II
III Initial Presentator/Producer Meeting(s) III
IV Post Presentator/Producer Meeting(s) Conference IV
V On-Going Review V
VI Preproduction VI
VII Second Presentator/Producer Meeting(s) VII
VIII Final Development Meeting VIII
IX Pre-Event Rehearsals IX
X Studio Preparation X
XI Production XI
XII Postproduction XII

## TRANSPORTABLE EARTH STATIONS

| Operator | Owner | Homebase |
|---|---|---|
| Compact Video | Compact Video | Los Angeles |
| PSSX | Public Service Satellite Consortium | Denver |
| SCN | SCN | Las Vegas |
| SSS | Turner Broadcasting | Atlanta |
| Wold | Robert Wold Company | Washington, D.C.<br>Los Angeles |

**PTV-OWNED UPLINKS (as of 6/82)**

| | |
|---|---|
| Denver, Colorado | KRMA |
| Denver, Colorado | PACIFIC MOUNTAIN NETWORK |
| Hartford, Connecticut | WPKT |
| Miami, Florida | WPBT |
| Tallahassee, Florida | WFSU |
| Indianapolis, Indiana | WFYI |
| Baltimore, Maryland | MARYLAND CENTER FOR PUBLIC BROADCASTING |
| Detroit, Michigan | WTVS |
| Lincoln, Nebraska | KUON |
| Columbia, South Carolina | WRLK |
| Washington, D.C. Area | PBS MOT<br>(WETA)<br>(WNVT) |

**WESTERN UNION-OWNED UPLINKS (as of 6/82)**

Los Angeles, California

San Francisco, California (WESTAR II and III only)

Atlanta, Georgia

Chicago, Illinois

New York, New York

Dallas, Texas (WESTAR II and III only)

Chapter 4

# NETWORKING

## SYNOPSIS

Networking point-to-point video-teleconferences is a reasonably simple task. The technical resources include an originating studio, uplinking facilities, satellite transponder, downlinking, receiving room and telephones.

Networking a point-to-multipoint video-teleconference with numerous receive sites requires extensive data to piece together the hundreds of resources needed.

In either case, networking is labor intensive. And there is sufficient competition in the market to keep profits low.

Generally, networking agents or brokers make the initial contract with clients; production is usually subcontracted. Seldom is the production unit the prime contractor.

Networking involves knowing who has what, i.e., production expertise, production centers with connectivity to uplinks, common carriers, satellite time, downlinks, receiving centers, etc.

Generally network management is the responsibility of the network coordinator, who--

(1) designs a system from numerous parts that will meet client requirements;

(2) solicits and contracts for service with each of the network elements;

(3) aids in the training of site facilitators;

(4) monitors and troubleshoots the technical aspect during events; and

(5) handles accounting functions.

To further complicate the task of networking, with rare exception, no two video-teleconferences are alike. Therefore, an off-the-shelf package cannot

be developed.

Networking has evolved as an industry in its own right. Several of the leading video-teleconference service providers in the country are foremostly networking agents. Production and origination services are regarded by these firms as subcontract parts of the overall networking service.

Production and program planning as the prime service, with networking as a subcontract service, is a recent development. It is a development that is most appropriate for public broadcasting facilities that want to maximize their involvement in the video-teleconferencing business. The question of whether to handle networking tasks internally, using station staff and resources, or to subcontract the networking function to an established networking agent is an important one. The most logical answer from the point of view of most public broadcasting facilities is to subcontract. (Public broadcasting facilities that already have an established data base of resources and a procedure for executing and managing a network service are rare exceptions.)

Since networking is labor intensive with low net-after-expenses, cash flow problems relating to networking services can sometimes be severe. There are enough established networking agents today (See Appendix A) to provide competitive pricing. Public broadcasting facilities seeking subcontracts with networking agents are well advised to assess all competing firms and use the best service provided at the most reasonable rate.

This chapter discusses the tasks necessary to provide thorough networking. By necessity, the following discussion is generic. Established networking agents will depart from the norm presented here in various ways; those offering comprehensive services meet the criteria implicit in this

discussion. What follows may also serve as a template for those public broadcasting stations who opt to tackle networking internally.

Information Requirements

(1) Production Facilities and their Transmitting Capabilities

Networking agents offering comprehensive video-teleconference services on a national scale accumulate and maintain information on production facilities across the country, and their satellite transmission capabilities. This particular information may not seem important to public broadcasting facilities seeking to produce video-teleconferences; however, sooner or later a successful video-teleconferencing service built upon production in a local market will lead to requests for services requiring production elsewhere. A local prospect may request a complete teleconference, originating in another city (through the role of the local public broadcasting station in such a case is typically one of referral rather than prime contractor), or a remotely-produced live sequence integrated into the main local production. In any case, knowledge of production and origination options in other areas of the country is an important part of a comprehensive networking service.

(2) Satellite Time

Satellite transponder time is the basic ingredient of a video-teleconferencing service. Up-to-the-minute information on transponder availability is essential. Established networking agents have this information because they have spent considerable time and energy establishing the contacts necessary to keep current, and/or because they lease or own satellite transponder time.

(3) Downlinks and Receive Sites

In this area, established networking agents have outdistanced any newcomer to the business. The combined downlink resources of the public

television satellite system, the Holiday Inn Video Network (HI NET), and ever-increasing numbers of independent hotels equipped with TVRO and vendors with transportable TVROs have been estimated to total between 750 and 1,000 available downlink and receive site options. New facilities equipped to provide this service are added daily. More hotel/motel chains, more independent conference and convention facilities, private businesses and corporations, chambers of commerce, religious facilities, and other kinds of facilities are expected to join the universe of available downlink and receive site resources and be available to outside users.

(4) Ad Hoc Configurations

The purpose for keeping current on networking information is to be able to assemble it into what is commonly referred to as an ad hoc network configuration. Configuration is a labor intensive task. The basic approach to configuration of an ad hoc network is to start with lists of all known downlink receive site facilities in the client's requested receiving cities. These lists must then be matched and the common denominators established. The common denominators are the satellites. Once it is determined which satellite (or satellites) can provide transmission service to the ad hoc network, it must then be determined if time can be acquired on that satellite. Undoubtedly transportables have an edge in this process because they can be set up to access virtually any satellite. The tradeoff is cost.

Established video-teleconferencing services that take on network tasks provide proposed configurations as a matter of course. No networking agent will refuse to assemble a network configuration for a client--such as a public broadcasting facility--which may be acting as a consultant for an actual user. It helps if the public broadcasting facility requesting the configuration has predetermined its own transmission capability. If a public television station

established that the most economical transmission route involves an uplink which transmits to a specific statellite, the networking agent will exclude receive sites that are incapable of receiving transmissions from this satellite.

Network configurations may or may not cost the inquiring public broadcasting facility. In the past, some networking agents have provided proposed configurations free of charge. However, as requests for configurations have increased—some agents report handling several a day—the apparent value of this service may result in the practice of charging for the configuration proposal.

(5) Solicitations and Booking

Most proposed network configurations reflect known capacities, not specific availabilities. The process of confirming availability, especially with large network configurations, is expensive and time consuming, and can be fruitless if the client does not approve the proposed configuration. Once a proposed configuration is accepted and a contract has been negotiated and signed, the process of soliciting the services of all the facilities begins.

Solicitation involves a variety of communications tools. The Public Service Satellite Consortium, for example, solicits services and then books them through a process of written requests for quotes, written service orders, and phone calls. The Holiday Inn Video Network uses the Holiday Inn computer-based reservations system. Public broadcasting stations may use the Direct Access Communication System (DACS) to solicit receive site services from colleague PTV stations, or CONFERSAT.

The labor spent in the solicitation and booking process depends upon the communication tools used and the size of the network configured. In any case, it is a cost item typically factored into the overall service charges of

established networking agents.

(6) Revisions

Because network configuration proposals are based on known capacities and not availability, costs are estimates, and usually are revised when the actual networking process commences. Revisions keep the networking agent occupied between the date of contract and the teleconference air date.

Revisions usually occur for one or two reasons--

a. As the date of production draws near the client elects to drop or add receive sites.

b. The networking agent learns when soliciting services that a facility is not available on the date requested.

Optionally either kind of revision can be handled with no formal revision of the contract. In some situations, however, the revisions result in adjustments to several line items. The unavailability of transponder time on the satellite originally proposed, for example, may require a complete restructing of the network configuration.

Revisions can be costly. Some networking agents itemize a contingency to cover a certain amount of revision. But, because many networking agents work with the same basic facilities, it is within mark-ups, contingencies and fees that they experience their greatest competitive pressure. Therefore, the lowest bid for a specific teleconference should be questioned. Though this may make the proposal more attractive to the end user, it can also result in add-on cost as the networking process unfolds.

Networking agents who have provisions in their budgets to cover revisions may also incorporate language in their contracts giving them the right to alter certain parameters of the network. The ultimate reason for such language in the contract is to permit the networking agent to make quick

revisions, if necessary, without having to delay while contract amendments are drafted and approved.

Network Operations

(1) Technical Plans

No two video-teleconferences are ever precisely the same. Therefore, video-teleconference operations can never be entirely routine. Because of this, networking agents must take special care to provide thorough technical operation plans.

Technical plans are shared with all facilities providing service for the video-teleconference. Plans can be simple, one page fact sheets, or they can be elaborate multi-page technical scripts. In most cases the plan itself, and the labor devoted to it, are totally unnoticed by the end user.

Though well planned and presented technical plans do not always result in incident-free video-teleconferences, many technically disastrous teleconferences have been associated with incomplete, ill-prepared or badly presented technical plans.

(2) Testing

The technical plan for a video-teleconference includes a section on pre-telecast tests. At a minimum, these tests involve powering up the satellite from the origination facility's uplink a few minutes before the telecast begins. More elaborate tests, recommended when production facilities unfamiliar with video-teleconferencing are used, include audio interaction tests. The audio interaction test may be one or more calls placed by technicians on the receiving network to the origination facility. The calling technicians talk or give a long count while technicians at the origination facility adjust foldback (or IFB) and mike levels to avoid feedback.

The networking agent is usually in charge of testing. This means that

the networking agent must be in a position to monitor the telecast and be reachable at all times by telephone. In some cases a "tech network" is used. Typically this is a conference call linking the networking agent with technicians at the point of origination and all receive sites.

An alternative to the tech network is to have explicit instructions in everyone's hands on how to contact the networking agent at any time during the telecast if there are problems. In this case, if the network is not too large, the networking agent may request that each receive site technician "log in" during the pre-conference on-air test. Public television stations with downlinking capabilities will have technical capability to perform this task, but may lack personnel with experience in troubleshooting and remedying problems. This is a cost item often overlooked by inexperienced networkers.

(3) During the Video-teleconference

The networking agent monitors the conference, handles problems from a central location, and may maintain an "events log" during the conference. Often there is some sort of agreement between the networking agent and client (either the end user or the public broadcasting facility acting as prime contractor) to delineate the kinds of problems that require the networking agent to contract the client. For example, it may be understood that if any receive site reports a problem that is not resolved in 15 minutes, the networking agent is to alert the client.

It is important that the chain-of-command, i.e., who is responsible for what, be clearly established. In the unlikely event of total failure--uplink or satellite failure--determine who has authority to take action. Some networking agents reserve a second uplink for just such an event. The second uplink may not be tied into the originating facility, but by powering up on the alternative uplink, the networking agent can transmit a character

generated message ("Please stand by - Technical Difficulties," or "Site Facilitators - Please call 222-555-6600").

The activities of the networking agent during a video-teleconference may be relatively minor, or relatively involved. Video-teleconferences that require multiple points of origination (rotating origination, or remote live inserts), involve considerably more networking responsibility. Typically in these cases the networking agent performs as a "network director" instructing uplinks to powerup and down in real time.

(4) After the teleconference

After the teleconference the networking agent may prepare a technical report which summarizes the log kept during the teleconference. This report may or may not be requested by the client.

The networking agent's greatest responsibility following the video-teleconference is the accounting task. The networking agent receives invoices from service providers and carriers, and prepares one or more invoices for the client. In the ideal situation, the invoice sent to the client reflects the contracted amount to the dollar; however, when the networking agent is required to take emergency action to correct problems during the video-teleconference, additional expenses may be incurred. Also, it is not unusual for the networking agent to receive invoices from service providers that, for one reason or another, do not correspond to the subcontracted amount originally agreed upon. Most of the time the networking agent handles these inconsistencies without ever bothering the client.

BUSINESS CONSIDERATIONS

Most public broadcasting facilities should contract with established networking agents, and invest their time and energies developing a local market for video-teleconference planning and production services. The

following business considerations relate to relationships and agreements between public broadcasting facilities and networking agents.

(1) Use an actual solicited or unsolicited video-teleconference proposal to identify a networking agent and to establish a relationship.

The networking agents listed in Appendix A are established but were not solicited during the preparation of this handbook. The degree to which they will support your attempt to sell a video-teleconference is unknown. This is why we strongly recommend that you approach them with a high probability event if you wish them to configure a network and prepare a cost estimate for you.

(2) Ask that the network configuration be submitted in the agent's standard contract format. This may or may not be their typical business practice (they may typically submit a proposal before a contract). But by requesting that they omit this step, you're doing both them and yourself a favor.

You are interested in three things about the networking agent--

a. their offered cost of the service;

b. their apparent competency and thoroughness; and

c. their contract terms and conditions.

If you receive a proposal instead of a contract, you may be unable to make fair competitive assessments. (Remember, a proposal is primarily a selling tool.)

(3) If you have not dealt with networking contracts before, you should have your legal counsel review them with you. You have two basic options going into your agreement with the client--

a. to absorb the network contract as a subcontract within your agreement with the client; or

b. to present the networking contract to the client as a direct contract

independent of your production contract. Both are options.

By absorbing the networking contract in your prime contract, you are positioning yourself as "boss" over the networking agent. This may work to your advantage because as the principal agent assisting the client, you may not wish to risk confusion in communications between you and the client, and between the client and the networking agent. As boss, the potential for confusion is reduced because the client has no reason to talk directly with the networking agent, or vice versa. All communications go through you.

On the other hand, if you do absorb the networking contract, you are assuming the limitations and liabilities written into the networking contract. If the client were to seek curative action for a real or perceived breach, you become the focal point of that action. Be quite sure that your contract with the client assumes no more liability than the networking agent's contract with you.

By passing the networking contract directly to the client you are avoiding any liabilities, but you also risk complicating the planning, production and execution of the video-teleconference. Also, bear in mind that you wish to establish a public awareness of yourself as the video-teleconference agent in your market. If you pass along contracts from others you are, to a certain degree, undermining your own central position.

(4) Handling the networking contract, especially if you absorb it is certainly a responsibility and inevitably a labor for which you ought to be paid. The question of whether to establish a management fee, to mark-up (or add cost plus a percent to) the bottom line on the networking contract should be taken up with your legal counsel.

The management fee approach is easiest to justify, but arguable from a marketing point-of-view. Mark-ups and cost-plus-percentage are more in line with typical service industries, but prohibit cost competitiveness.

Chapter 5

# RECEIVING

## SYNOPSIS

A remote-viewing site is more than signal receiver.

Networking agents are beginning to require more hospitality and facilitation services. Both translate into labor and/or out-of-pocket cost.

Hospitality includes items such as ample parking; catering and refreshment services; clean, comfortable environments; and a representative who will pay close attention to the viewer's needs. With the growing competition from hotel, motel and meeting facilities, public television stations must do more than just place chairs in front of a monitor.

Facilitation requirements include installing the exact telephone system ordered, room set-up according to prescribed service orders, providing monitors and video projectors, etc.

Some stations have set up rooms specifically designed for conferences. Some rooms have dedicated furniture, monitors, projectors, rest rooms and kitchens. These stations are preparing to compete with the hotels and meeting facilities by providing the amenities participants and clients prefer.

On the technical side, many competing receive facilities are equipped to access a wide variety of C-band satellites. Currently, most public television station antennas are fixed--limiting reception to WESTAR IV. Most stations are further restricted to the direct polarized transponders. These limitations will be felt when networking agents opt to use other satellites or cross-polarized transponders.

Where public television stations have a salable advantage over other networks is the area of "quality assurance." Receivers located at most other facilities are operated by maintenance engineers, clerks or the like.

For detailed information, continue reading this chapter.

The role of public broadcast stations as receive sites for video-teleconferences is diminishing. Hotels and motels equipped with TVROs; the rise of specialty networks; the improving reliability of transportable TVROs; and the more sophisticated demands of video-teleconference clientele all encroach upon public broadcasting stations to provide receive site services. Nevertheless, business for public broadcasters still exits in this component of video-teleconferencing.

This chapter iterates the basics of providing an effective downlink and receive site service. It also departs from those basics to discuss how the provision of this service ought to enhance a public broadcasting facility's marketing for video-teleconference production and origination services.

Public broadcasting facilities have never had a uniform pricing formula for downlinking and receive site services. Regrettably, this has complicated the networking of these stations for ad hoc events. No uniform pricing schedule can be imposed on individual public television stations. Nevertheless, the business section of this chapter proposes a model for determining a pricing structure. Though this would not result in uniform pricing among public television stations, if adopted, we believe it would simplify the networking process and consequently improve the desirability of public television stations as downlink and receive sites in this increasingly competitive video-teleconference market.

Accessibility

Accessibility to the public broadcasting facility is obviously important. Public television stations, and public radio stations retrofitted to provide video services, can improve their chances of being selected to provide receive site services if they illustrate their station's accessibility, and can impart an eagerness to participate in video-teleconferencing. This should not be a

difficult thing to do.

Public broadcasting facilities should prepare an 8 1/2" X 11" map which shows the location of their facility in relation to--

--major access roads,

--airports,

--known community landmarks, and

--hotels/motels and convenient restaurants.

Typed on the bottom or the back of this map should be--

--instructions about public transportation,

--parking, and

--phone numbers of local hotels/motels and restaurants noted on the map.

Viewing rooms should be easily accessible from the main entrance and reception areas of the station. The access route from the entrance to the viewing room should be direct, free of clutter, and clean. Lavatories should be handy from the viewing room. A simple line drawing on a second 8 1/2" X 11" sheet of the layout of the station, pointing out viewing room and access route to the room would also be helpful.

Both illustrations (map and station layout drawings) should routinely be submitted to the soliciting networking agent along with the written quotation. Neither the networking agent nor the local site facilitator for the video-teleconference should have to ask for this kind of information.

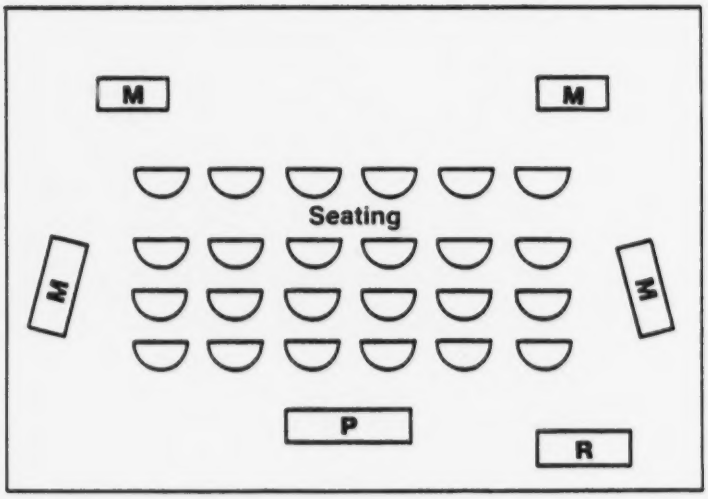
Rooms and Equipment

Seating Styles: Figures One, Two and Three show the three most popular viewing room arrangements for video-teleconferences: auditorium, conference, and schoolroom styles. Different kinds of video-teleconferences call for one or another of these arrangements.

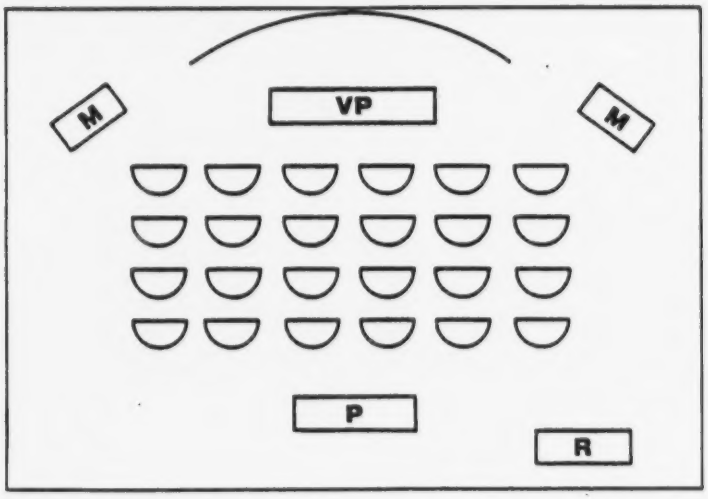
Typically, auditorium-style viewing is requested for large groups and for

## FIGURE ONE

### Auditorium Style
### Viewing Room Arrangement




**M** – Monitors
**P** – Telephone
**R** – Refreshments

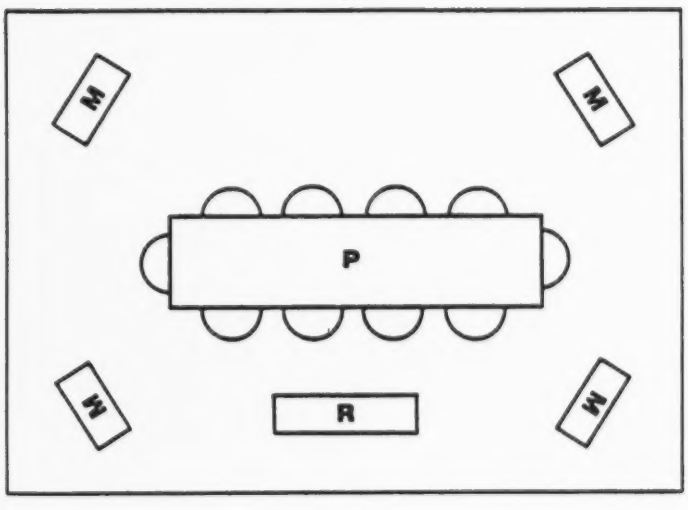



**VP** – Video Projector

## FIGURE TWO

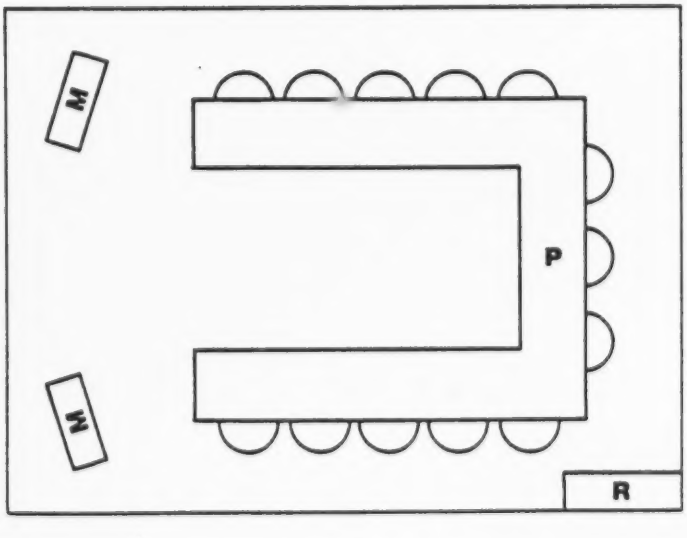
### Conference Style Viewing Room Arrangement

A




M – Monitors
P – Telephone
R – Refreshments

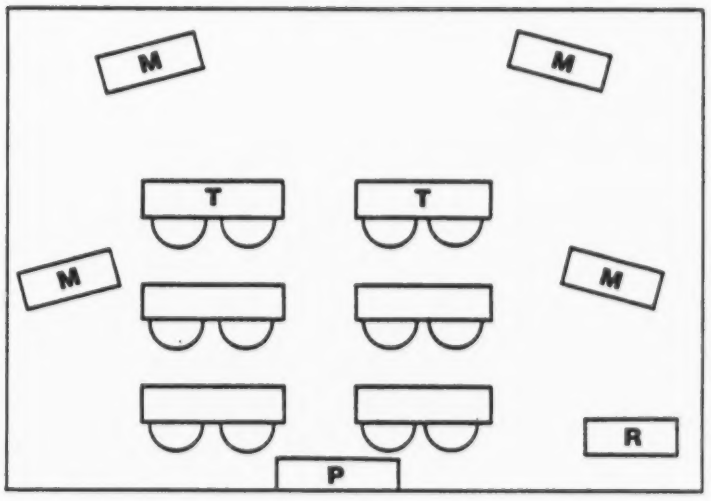
B



## FIGURE THREE

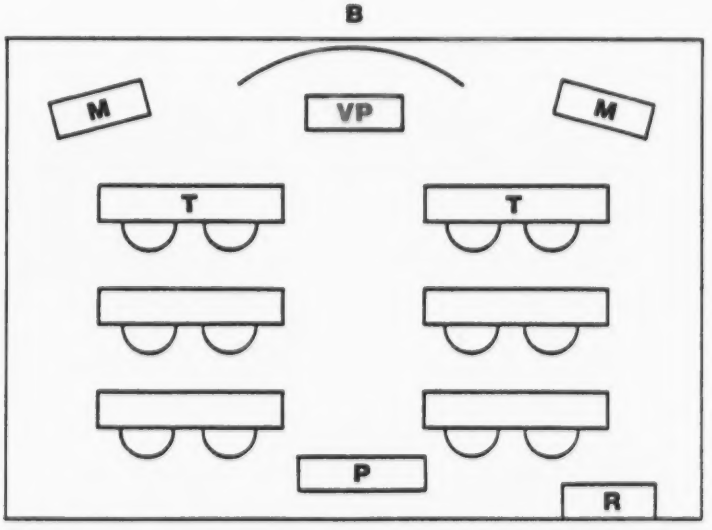
### School Room Style
### Viewing Room Arrangement

A




M – Monitors
P – Telephone
R – Refreshments
T – Tables

B




M – Monitor
VP – Video Projector
T – Table
P – Telephone
R – Refreshments

conferences requiring little or no viewer activity. Conference-style seating is requested for video-teleconferences involving smaller groups of people who, at some point during the video-teleconference, are expected to interact with one another. Schoolroom style is requested for audiences of varying sizes who are required to take notes or refer to printed material during the video-teleconference.

Public broadcasting facilities that have been involved in video-teleconferencing no doubt know what their room capacities are in these various arrangements. If you have not calculated the capacities for these room arrangements, you should.

Monitors and Video Projectors: For the most part, public television stations (and public radio stations that intend to retrofit for video) will not have problems supplying the required number of monitors. The required number for a particular video-teleconference depends on what the networking agent may specifically request, or your common sense as you arrange the room. One long-established rule of thumb calls for no more than one person per diagonal inch of monitor screen. For example, under this rule, twenty-five people could view a 25" monitor. In practice, however, fewer people per monitor is typical.

Video projectors and large-screen viewing have become extremely popular for video-teleconferencing (regardless of audience size), but certain cautions are in order--

o Large screen projectors tend to exaggerate picture degradation or interference. Don't use them if your satellite reception is not of sufficiently high quality (50 db S/N or better is recommended).

o Video projectors are not as reliable (yet) as monitors or receivers. If you use one, have a back-up handy, or use flanking monitors.

o Luminance values on consumer video projectors (e.g., Advent, Sony, etc.) are relatively low. In schoolroom- or conference-style arrangements - where writing and reading occur as well as TV viewing - house lights must be higher which further diminishes the relative brightness of the projected video.

If you are specifically requested to provide large screen viewing in a schoolroom- or conference-style video-teleconference, work with your lighting to keep the audience area sufficiently lit while keeping the area between the projector and screen, and behind the screen, as dark as possible. Avoid all reflections of room lights on the video screen.

A final word on monitors and projectors: If you do not have the required equipment, it is easy to rent. You should determine where such equipment is available in your community and how much it costs. Having this information on hand will also help expedite your response to service requests.

Telephones: Usually you'll be asked to provide a standard telephone in the viewing room for audience interaction. This phone should be on a private line, not an extension of your stationwide telephone system - particularly if your system is PBX. If this requires a special order, predetermine costs and lead time to refer to when a service is requested.

Do not anticipate requirements for outgoing MATS lines, telephone amplifiers, or modified instruments (e.g., push-to-talk handsets). Installation of such devices on your own invariably leads to confusion. If these other devices are already in the viewing room, hide them unless they have been specifically requested.

Telephone placement in the viewing room may be dictated by the networking agent in the service request. Presume the phone should be located as far away from the program audio source as possible. Regardless of the number of

monitors, video projectors, or television receivers used, it is usually best for program audio to emanate from a single source in the viewing room. Exceptions are, of course, large rooms requiring public-address audio amplification. The purpose of keeping the phone as far as possible from the audio source is to reduce pickup of the program audio through the telephone handset (which, if excessive, produces "cat-chasing-tail" feedback through the satellite).

Rarely, if ever, will more than one telephone be requested. If more are requested, ascertain whether each phone is to have a separate line, or whether multiple phones are to be extensions on a single line. When using extension phones on a single line, you must closely monitor program audio level and take care in telephone placement because of the audio feedback problem through satellite.

Furniture: Public broadcasting facilities often rent furniture for video-teleconference participants.

Here are some do's and don'ts:

o Do rent padded folding chairs, or comfortable stacking chairs. Don't rent metal folding chairs.

o Do rent tables with attractive surfaces. Don't rent tables which are intended to be covered.

o Do rent tables for conference style or schoolroom style seating. Don't rent "student chairs" which have writing surfaces extending from an armrest.

o Do ensure that all furniture is clean and dust free when guests arrive.

o Do ensure that there is a coat closet or rack available to guests.

Hospitality

Public broadcasting facilities that intend to develop a local video-teleconference production business should be aware that guests who come to the station to view video-teleconferences produced elsewhere comprise the same public you wish to make aware of your video-teleconference origination services. (Incidentally, they also comprise the public to which you appeal during membership drives and auctions.) Therefore, hospitality warrants a little extra effort.

Consider the following ideas:

o Table dressing: One good way to raise public awareness of your station, and impress guests is to provide letterhead tablets and pencils on tables or chairs. Expect the guests to take these with them when they leave.

o Refreshments: Coffee, decaffeinated coffee, tea and water routinely should be provided in the viewing room. Refreshments should be provided once for a morning or an afternoon video-teleconference; or both in the morning and in the afternoon for an all-day video-teleconference.

o Catering: Cold deli lunches should be available for clients at added expense. Also, know the nearest restaurant guests can patronize during an extended lunch break.

o Signs: It is always desirable to have a sign in the reception area of your station welcoming guests to the video-teleconference. The sign should state which room the guests are to use and point the way (or, the sign should direct guests to check in with the receptionist).

o Name tags: Providing visitor names tags (with your station logo) is also a good idea. The guest will keep the tag after the conference (more public awareness) and wearing the name tags during the video-teleconference provides the guest with an "I'm-supposed-to-be-here" attitude, which helps if

the guest gets lost and has to ask a station employee for assistance.

o Video and/or audio taping: Depending on the nature of the video-teleconference, local taping of the feed, or taping the guests participating may be desirable. Predetermine charges for these services.

o Photography: Depending on the nature of the video-teleconference, clients may want photographs of the local group participating in the video-teleconference. Unless you expressly state your ability and willingness to provide this service, client planners or local site facilitators are apt to arrange for an outside photographer.

o Mike/mixed audio return: For larger auditorium-style video-teleconferences, you may wish to volunteer a head table and/or floor-standing microphone for the telephone audio return to the production site. You can provide this by feeding mike audio into TELCO through your audio board. CAUTION: Be certain to work out the logistics of placing the call(s) with the networking agent. Establish a rate for this service.

o Host/Intercom: Normally you will not be expected during video-teleconferences to have an employee/host in the viewing room at all times. If something goes wrong, however, you must have someone available immediately. An intercom line to a phone in the viewing room can accomplish this if you ensure that someone (at your reception desk or in a control room) is always available via the intercom. Technical assistance must always be available.

It may be appropriate to use station volunteers to handle many of these hospitality tasks. The job requires a person with a knowledge of your plant - someone who likes helping people and is friendly and congenial. (Case studies have shown that, when everything else was equal, overall "good" and "excellent" rated conferences have received negative evaluations from selected sites

where hospitality has been neglected.)

If You Must Use Your Studio for Audience Viewing

- Strike all sets
- Use cycloramas to border the viewing area
- Use set lights to highlight important areas (e.g., refreshment table, exists, registration or material table); use house lights for general illumination
- Use platforms sparingly (if at all)
- Hide cameras and other production equipment not in use
- Don't turn on your "On Air" light (it's distracting and misleading)
- Pay particular attention to climate control
- Restrict smoking, eating and drinking to areas away from electronics

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## Signal Redistribution Services

Do you have a portable microwave system capable of transmitting from your station? Are you closed-circuit wired to other buildings?

In either case, your potential audience viewing accommodations are probably much greater than what you can provide in the station. Look around you for facilities easily reached through signal redistribution. Assess their capacities and costs. Establish procedures for using them. Having this information available will help you turn around a service request quickly and may make the difference between winning the receive site contract or losing it.

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BUSINESS CONSIDERATIONS

Many public television stations already have video-teleconference receive sites, and have established business practices and price schedules that work well or poorly. The business considerations section of this chapter is offered, not necessarily as a better approach, but merely as providing services or changes in their established practices and pricing schedules.

(1) Service requests from networking agents may or may not be comprehensive and safe from a legal point of view. Before you submit a response, you should have your legal counsel review both the request and response to determine your potential liability.

If the service request contains "boilerplate" statements of liability affecting both you and the networking agent, review these carefully. If not, respond with your own statement limiting your liability.

(2) Consider cancellations and change orders. What will it cost your station if an event is cancelled a day before it was to happen? A week? At which point, if any, is it in your best interest to establish a cancellation policy and rate?

(3) Consider confirmation policy. The service request you receive from a networking agent may not be a request for a confirmed booking. Some agents solicit quotations before committing to the service. Others expect the service request to be interpreted as a firm request, to be cancelled later if the cost you submit is unacceptable.

If your station policy prohibits you from holding a date open while waiting for a confirmation from the networking agent, be sure to let the networking agent know. If you receive a service request for a booking (as opposed to quotation), and find that the request cannot be confirmed because of station policy, respond with this information and be sure to tell the agent

how soon his booking can be confirmed.

(4) Preceding sections in this chapter recommend approaches to handling video-teleconference receive site services that all translate into labor and/or out-of-pocket cost for the public broadcasting facility.

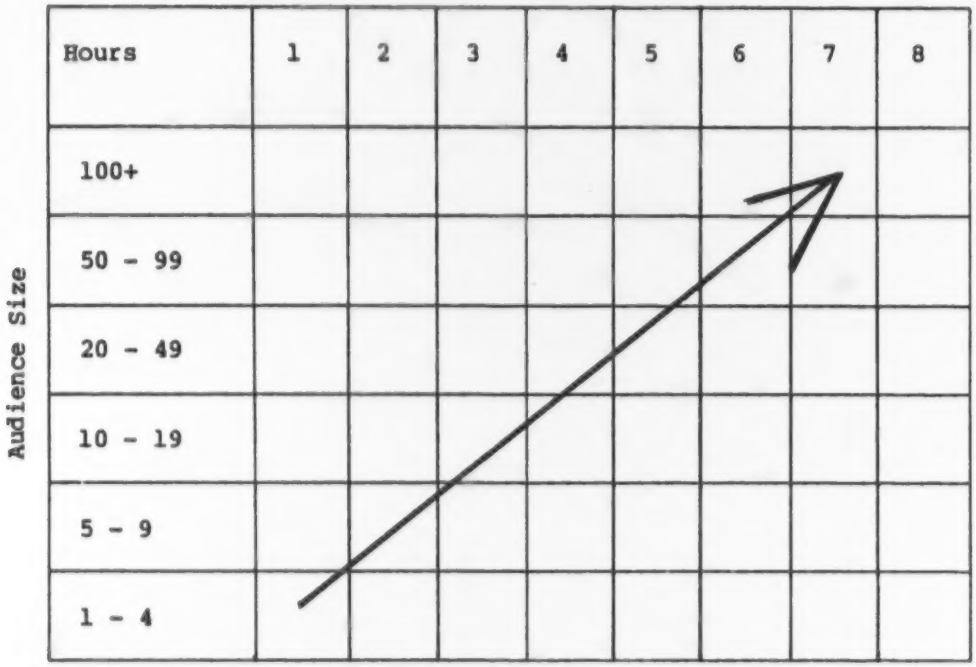
While it seems to be a common practice for public broadcasting facilities not to predetermine or publish rates for receive site services, but to respond to each service request on a case-by-case basis, the authors recommend a more uniform approach to pricing when possible. Table One is an example of a pricing formula. The variables are numbers of people to be accommodated and duration of event. This approach to establishing a uniform rate schedule presupposes that you can fix certain variables, including--

- o cost per hour for use of satellite receiving equipment
- o cost per hour and number of hours necessary to set up rooms
- o out-of-pocket costs such as furniture rental, telephone installations, rental of extra monitors or video projectors
- o the number of video monitors and/or projectors you intend to use routinely to accommodate various size audiences.

Additionally, you need to determine how much income you expect to generate through the provision of these services.

Of course, you will receive requests calling for services and arrangements not anticipated in your rate schedule. In these cases, the rate schedule provides a point of departure.

TABLE ONE: MODEL PRICING FORMULA FOR RECEIVE SITE SERVICES
Charges escalate in the direction of the arrow.




SAMPLE KEY:

Rates include:

1. Facilities occupancy, regardless of satellite access time.
2. Set up. (Maximum capacity is 200 people auditorium style, 150 people school room style.)
3. One serving of coffee, decaf, or tea per person in a.m. and p.m.
4. One standard telephone (direct dial, private line).
5. Viewing equipment as follows:

| People | Units | Equipment |
|---|---|---|
| 1-4 | 1 | 19" Monitor |
| 5-9 | 1 | 19" Monitor |
| 10-19 | 2 | 19" Monitor |
| 20-49 | 1/2 | 7' Advent/19" Monitor |
| 50-99 | 1/4 | 7' Advent/19" Monitor |
| 100+ | 1/4 | 12" Aquastar/19" Monitor |

6. Station host (technician).

(TABLE ONE, Continued)

NOTES:

Though rates escalate in the general direction of the arrow, they should not escalate proportionately. Here's the table filled in with hypothetical figures in two audience size categories:

| Audience Size / Hours | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 100+ | | | | | | | | |
| 50 - 99 | $250 | | | $325 | $375 | $400 | $425 | $450 |
| 20 - 49 | | | | | | | | |
| 10 - 19 | | | | | | | | |
| 5 - 9 | | | | | | | | |
| 1 - 4 | $75 | | $100 | $120 | $135 | $145 | $150 | $155 |

Some of your out-of-pocket costs--furniture rental, for example--may be on fixed- day or half-day rates. It may cost you $100 to rent 90 chairs regardless of whether the conference lasts one hour or eight hours. You could build this into the rate for a group of 90 people by establishing a three-hour minimum occupancy time. Successive hours cost you less, therefore incremental per-hour increases can level off: the first two hours of use for 1-4 people, above is hypothetically set at $75. The next (third) hour costs an additional $25 (total fee becomes $100). The next (fourth) hour costs an additional $20 (total fee becomes $120). The next (fifth) hour costs an additional $15 (total fee becomes $135). The next adds $10; then the seventh and eighth hours cost $5 more each.

WETACOM
P.O. Box 2626
Washington, D.C. 20013

Wold Entertainment
10880 Wilshire Boulevard
Los Angeles, California 90024

Establishment of a rate schedule like the model above helps to expedite your response to a service request, lends your operation a consistency which will be appreciated by networking agents--a potential competitive advantage--and permits some basis upon which to build income projection.

# APPENDIX A

## PARTIAL LIST OF VIDEO-TELECONFERENCE NETWORKING AGENTS AND PACKAGERS

Bonneville Satellite Corporation
165 Social Hall Avenue
Salt Lake City, Utah 84111

Holiday Inn Video Network
4796 Lamar Avenue
Memphis, Tennessee 38195

NETCOM International
1702 Union Street
San Francisco, California 94123

Organizational Media Systems
8700 Davis Boulevard
Fort Worth, Texas 76180

CONFERSAT (Public Broadcasting Service)
475 L'Enfant Plaza S.W.
Washington, D.C. 20024

Public Service Satellite Consortium/Services for Satellite
1660 L Street, N.W., Suite 907
Washington, D.C. 20036

Pryamid Video, Inc.
340 National Press Building
Washington, D.C. 20045

Spotlight Presents
20 East 46th Street
New York, New York 10022

TNT Communications, Inc.
575 Madison Avenue
New York, New York 10022

TeleConcepts in Communications, Inc.
145 East 49th Street
New York, New York 10017

VideoNet
21031 Ventura Boulevard, Suite 907
Woodland Hills, California 91364